

From the INTERNATIONAL BUREAU

PCTNOTIFICATION CONCERNING
TRANSMITTAL OF COPY OF INTERNATIONAL
PRELIMINARY REPORT ON PATENTABILITY
(CHAPTER I OF THE PATENT COOPERATION
TREATY)

(PCT Rule 44bis.1(c))

To:

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24 MAY 2006

Action by

hpr

Date of mailing (day/month/year)

18 May 2006 (18.05.2006)

Applicant's or agent's file reference

N.88928A NP/MPR

IMPORTANT NOTICE

International application No.

PCT/GB2004/004710

International filing date (day/month/year)

05 November 2004 (05.11.2004)

Priority date (day/month/year)

06 November 2003 (06.11.2003)

Applicant

UCL BIOMEDICA PLC et al

The International Bureau transmits herewith a copy of the international preliminary report on patentability (Chapter I of the Patent Cooperation Treaty)

The International Bureau of WIPO
34, chemin des Colombettes
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Dorothee Mülhausen

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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference N.88928A NP/MPR	FOR FURTHER ACTION	See item 4 below
International application No. PCT/GB2004/004710	International filing date (<i>day/month/year</i>) 05 November 2004 (05.11.2004)	Priority date (<i>day/month/year</i>) 06 November 2003 (06.11.2003)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant UCL BIOMEDICA PLC		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).

2. This REPORT consists of a total of 7 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

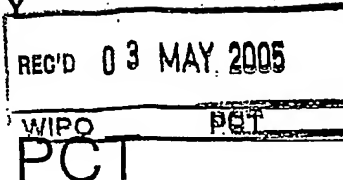
3. This report contains indications relating to the following items:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Box No. I | Basis of the report |
| <input type="checkbox"/> Box No. II | Priority |
| <input type="checkbox"/> Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input checked="" type="checkbox"/> Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> Box No. VI | Certain documents cited |
| <input type="checkbox"/> Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> Box No. VIII | Certain observations on the international application |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Date of issuance of this report 08 May 2006 (08.05.2006)
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PATENT COOPERATION TREATY



From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/GB2004/004710

International filing date (day/month/year)
05.11.2004

Priority date (day/month/year)
06.11.2003

International Patent Classification (IPC) or both national classification and IPC
A47C23/00

Applicant
UCL BIOMEDICA PLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/GB2004/004710

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GB2004/004710

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees, the applicant has:
- ☒ paid additional fees.
 - ☐ paid additional fees under protest.
 - ☐ not paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
- ☐ complied with
 - ☒ not complied with for the following reasons:
see separate sheet
4. Consequently, this report has been established in respect of the following parts of the international application:
- ☐ all parts.
 - ☒ the parts relating to claims Nos. 1,39,41,45

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-3,6-8,20-24,29,35,36,39,41-49,53-68,72,73,77
Inventive step (IS)	Yes: Claims	4,5,9-19,25-28,30-35,37,38,40,69-71,74-76,78-83
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-83
	No: Claims	

2. Citations and explanations

see separate sheet

Reference is made to the following document: D1: US-A-4 367 897.
D2: GB-A-2 335 669.

Re Item IV.

This Authority considers that there are 3 inventions covered by the claims indicated as follows:

- I: Claims 1, 39, 41 and 45 are directed to a flexible sheet structure comprising a plurality of modules rotatable about parallel and orthogonal axes with respect to one another.
- II: Claim 50 is directed to the design of a module for use in a flexible sheet.
- III: Claim 53 directed to a lockable articulated structure.

These three groups of inventions are not so linked as to form a single general inventive concept, as required by Rule 13.1 PCT.

The single general concept linking a plurality of inventions according to the independant claims can be defined by the common features of these claims. In the present case the only common feature is a "module".

However a "module" is already known from D1.

Consequently the single general concept in the present case is not novel, and thereby by definition not inventive.

In conclusion, the groups of independant claims are not linked by common or corresponding special technical features, but conversely define 3 different inventions not linked by a single general inventive concept.

The application, hence does not meet the requirements of unity of invention as defined in Rules 13.1 and 13.2 PCT.

Re Item V.

(I) The present application does not meet the criteria of Article 33(1) PCT with regard to the subject-matter of claim 1, because it is not new in the sense of Article 33(2) PCT.

Document D1 discloses (the references in parentheses applying to this document): A flexible sheet structure (see fig.2, item 14) comprising a plurality of modules (24) connected together, said plurality of modules being connected together so that each module is capable of rotating about first and second axis with respect to the neighbouring module to which it is connected (see position of modules indicated in fig.1), said first axis being parallel to the plane of the sheet when laid flat and said second axis being orthogonal to the plane of the sheet when laid flat.

All of the features of independant claim 1 are therefore disclosed in D1.

Furthermore, the embodiments of the flexible sheet described in independant claims 39, 41 and 45 are also disclosed in D1.

Dependent claims 2, 3,6-8, 20-24, 29, 35, 36, 42-44, 46-49 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step.

However, the remaining claims dependant on claim 1 do appear to contain additional technical features, which appear to satisfy the requirements of Article 33 (1)-(3) PCT.

(ii) Independant claim 53 does not satisfy the requirements of Article 33 (1) and (2) PCT because the subject matter therein is disclosed in D2.

D2 discloses: a lockable articulated structure (see fig. 6) comprising a plurality of nodes (see fig. 5) connected together so that said modules are selectively moveable with respect to one another, at least one connection between two said modules comprising a locking material (i.e glue, see description page 7, line 21) capable of assuming two states, said two states including a first state (i.e. unset glue) which allows relative movement of said components and a second state (i.e. set glue) which at least substantially prevents such movement, a transition between said two states being accomplished by the selective introduction of energy** to said locking material.

** please note that heating (or cooling) of the epoxy glue in D2 would cause a transition its state, thereby allowing it to either set, or return to its fluid unset state.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)

International application No.

PCT/GB2004/004710

All of the technical features of independant claim 53 are therefore disclosed in **D2**.

Furthermore, the features of dependant claims 54-68, 72, 73 and 77 are also disclosed in D2. However, the remaining dependant claims in combination with claim 53 appear not to be known from the available prior art.